ENVIRON

LETTER OF TRANSMITTAL

Date: December 27, 2007

To: Matthew Ohl
USEPA Region 5
77 West Jackson Boulevard
Mail Code SR-6J
Chicago, IL 60604

cc: Thomas Krueger – USEPA
Bruce Hamilton – IDEM
Tim Harrison – CH2M HILL
Catherine Schripsema – CH2M HILL
Norman Bernstein – N.W. Bernstein & Associates

Re: Contractor Submittals
ECC, Zionsville, Indiana

As discussed at the pre-construction meeting held on Tuesday, November 13, 2007, enclosed are the following documents, prepared by HIS Contractors:

- Contractors Health and Safety Plan, and
- Storm Water Pollution Prevention Plan (Erosion Control Plan).

If you have any questions, please contact Stan Popelar at (847) 685-9277.

From: Ronald E. Hutchens/robbie Project No. 21-6585M

If enclosures are not as noted, please notify us immediately.

740 Waukegan Road, Suite 401, Deerfield, IL 60015 Tel: (847) 444-9200 Fax: (847-444-9420 www.environcorp.com

STORM WATER POLLUTION PREVENTION PLAN
(Submitted by: HIS Constructors, LLC)

Storm Water Pollution Prevention Plan (Erosion Control Plan) FOR ATTACHMENT Z-1 REMEDY

ENVIRO-CHEM SUPERFUND SITE ATTACHMENT Z-1 REMEDY 985 SOUTH U.S. HIGHWAY 421 ZIONSVILLE, INDIANA

Prepared for:

Environ International Corporation
740 Waukegan Road, Suite 401
Deerfield, IL 60015

Submitted by:

HIS Constructors, LLC.
5150 E 65th Street, Suite B
Indianapolis, IN 46220

December 14, 2007

Table of Contents

Section 1	**SWPP Certification**	**2**
1.1	Contractor and Subcontractor Certification	2
Section 2	**Introduction**	**4**
2.1	Purpose	4
2.2	Plan Organization	4
Section 3	**SWPP Coordinator and Responsibilities**	**5**
Section 4	**Site Description**	**6**
4.1	Site Location	6
4.2	Existing Site Conditions	6
4.3	Description of Construction Activities	6
Section 5	**Best Management Practices**	**8**
5.1	Erosion and Sediment Controls	8
	5.1.1 Stabilization Controls	8
	5.1.2 Structural Controls	9
	5.1.3 Storm Water Management	10
5.2	Other Controls	10
5.3	Coordination of BMPs with Construction Activities	11
Section 6	**Maintenance and Inspection Procedures**	**12**
Section 7	**Record-keeping**	**14**
Section 8	**SWPP Amendments**	**15**
References		**16**

Figures

1 Site Location Map

2 Sediment and Erosion Control Plan and Location of Stored BMP's

Appendices

A Representative Details for Standard BMPs

B Sample Inspection Report Form

Section 1 SWPP Certification

1.1 Contractor and Subcontractor Certification

Each Contractor and Subcontractor that will be implementing a control measure as described in this SWPP must sign a one of the certifications below before conducting any professional service at the Site.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designated to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Brian Keene — Contractor's Signature

12-14-07 — Date

HIS Constructors, LLC - Ops Mgr — Contractor's Name and Title

Name of Contractor Firm

5150 E 65th Street Suite B — Address

317-541-9290 — Telephone Number

"I certify under a penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit that authorizes the storm water discharges associated with construction activity from the Enviro-Chem Superfund Site identified as part of this certification."

Brian Keeney — 12-14-07

Subcontractor's Signature — Date

Brian Keeney - Ops Mgr

Subcontractor's Name and Title

HIS Constructors, LLC

Name of Subcontractor Firm

5150 E 65th St Suite B

Address

317-541-9290

Telephone Number

Description of work or what Part of the SWPP responsible:

Section 2 Introduction

This Storm Water Pollution Prevention Plan (SWPP) document was prepared for HIS Constructors, LLC (HIS) and their use at the Enviro-Chem Superfund Site in Zionsville Indiana.

2.1 Purpose

This SWPP has two primary objectives:

- Identify, construct, and implement Best Management Practices (BMPs) to reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges from the construction site during construction; and
- Develop maintenance and inspection procedures for BMPs that are implemented during the construction period.

This SWPP is intended to fullfill requirements for construction activities that disturb greater than 1 acre of land, as required. This SWPP conforms with the required elements of the NPDES regulation, to ensure compliance, this plan was prepared in accordance with various USEPA guidance documents including Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices and Construction Site Stormwater Discharge Control: An Inventory of Current Practices.

This SWPP will be modified and amended to reflect any changes in construction or operations that may affect the discharge of pollutants from the construction site to surface waters or groundwater. The SWPP will also be amended if it is in violation of any condition of the Permit or has not achieved the general objective of reducing pollutants in storm water discharges. The SWPP shall be readily available on-site for the duration of the project. The SWPP Plan is also intended to fulfill the requirements identified in specification 1502 This plan also meets any applicable local requirements (if any).

2.2 Plan Organization

This document is divided into eight sections of text. A brief description of each section is presented below.

Section 1.0, SWPP Certification, presents the certifying statement and the associated signatories.

Section 2.0, Introduction, describes the purpose and organization of the SWPP.

Section 3.0, SWPP Coordinator and Responsibilities, identifies the parties who will supervise implementation of the SWPP and their responsibilities.

Section 4.0, Site Description, provides a summary of the site characteristics and the construction activities that will be performed.

Section 5.0, Best Management Practices, describes the storm water control measures that will be implemented at the construction site. Proposed locations are also provided.

Section 6.0, Maintenance and Inspection Procedures, summarizes the inspection procedures that will be conducted to ensure the effectiveness of the prescribed BMPs.

Section 7.0, Record-keeping, outlines the SWPP documentation requirements.

Section 8.0, SWPP Amendments, describes conditions, which require amendment of this SWPP.

Section 3 SWPP Coordinator and Responsibilities

The SWPP Coordinator for the construction site is:

Mr. Kieran Hosey
Project Manager
HIS Constructors, LLC
5150 E 65th Street Suite B
Indianapolis, IN 46220
(317) 541-9290

The SWPP Coordinator shall have primary responsibility and significant authority for the implementation, maintenance, and inspection associated with the approved SWPP. Duties of the SWPP Coordinator include but are not limited to:

- Implement all elements of the SWPP, including but not limited to:
  - Implementing prompt and effective erosion and sediment control measures
  - Implementing all non-storm water management, and materials and waste management activities such as: monitoring discharges; general site clean-up; vehicle and equipment cleaning, fueling and maintenance; spill control; and ensuring that no materials other than storm water are discharged in quantities which will have an adverse effect on receiving waters or storm drain systems;
- Ensure Contractor compliance with the SWPP and the Permit;
- Ensure that pre-storm, storm event, and post-storm inspections are completed;
- Implement and oversee Contractor training;
- Ensure elimination of all unauthorized discharges;
- The SWPP Coordinator shall be assigned authority by the Contractor to mobilize crews for immediate repairs to the control measures, if necessary; and
- Ensure that necessary corrections/repairs are made immediately, and that the project complies with the SWPP, Permit, and any associated plans.

Section 4 Site Description

This section describes the pertinent site characteristics and nature of the planned construction activities.

4.1 Site Location

The construction site is located off County Road 421 located in Boone County, north of Zionsville, Indiana, approximately 10 miles northwest of Indianapolis, in an area that is primarily agricultural but also contains some areas of commercial and industrial land use.

4.2 Existing Site Conditions

The site is situated on a pre-existing Superfund Site along Unnamed and South drainage ditch. Near surface soils consist of relatively impermeable brown silty clay which overlies the contaminated fill material.

Precipitation that does not infiltrate the landfill is presently being sheet flowed to the Unnamed and South Drainage Ditch Area.

4.3 Description of Construction Activities

HIS is performing construction activities to build an Augmented SVE Trench in accordance with the plans and specifications. Also part of the work activities, include replacing the cover system to be installed to further minimize permanent erosion. Major items of work include:

- Clearing and grubbing;
- Temporary erosion and sediment measures;
- Water management;
- Trench Excavation;
- Installation of Slurry trench;
- Installation of SVE Augmented System with backfill:
- Geomembrane and Clay cover;

Construction activities will be performed in sequence to minimize the area of exposed soils and to construct the permanent erosion control measures into the project as soon as possible. The planned order of activities is outlined below:

1. Installation of temporary structural erosion control measures;
2. Clearing and Grubbing (as needed)
3. Site Preparation of Temporary Roads and Laydown Area;
4. SVE Trench Excavation and Installation;
5. Backfill SVE Trench;

6. Install Geomembrane and Clay Liner;
7. Installation of permanent erosion and vegetation measures
8. Removal of temporary erosion control measures.

The following estimates are provided for the construction site:

Total area of site if about	6	acres
Disturbed area	2	acres
Runoff coefficient before construction	0.30	
Runoff coefficient after construction	0.40	

Section 5 Best Management Practices

This section describes the Best Management Practices (BMPs) that will be implemented at the site. Figure 2 displays drainage patterns, areas of disturbance, approximate final slopes, and site locations where the prescribed BMPs will be implemented at the landfill.

5.1 Erosion and Sediment Controls

Various BMPs including stabilization controls, structural controls, and storm water management controls will be implemented to control and mitigate the impacts of storm water runoff at the construction site.

5.1.1 Stabilization Controls

Soil stabilization, also referred to as erosion control, consists of source control measures that are designed to prevent soil particles from detaching and becoming suspended in storm water runoff. Soil stabilization BMPs protect the soil surface by covering and/or binding soil particles. This project will incorporate both temporary and permanent soil stabilization measures. This project will utilize and implement the following BMPs for effective temporary and final soil stabilization during construction:

- Preserve existing vegetation where required and when feasible. The time period for disturbed areas to be without vegetative cover will be minimized to the extent practical;
- Apply temporary soil stabilization (erosion control) to remaining active and non-active areas. Reapply as necessary to maintain effectiveness;
- Implement temporary soil stabilization measures (e.g. mulch) in non-active areas where construction activities have ceased for a period of 14 days;
- For areas with a slope of greater than 3:1 or a slope of greater than 3% and greater than 150 feet in length, implement temporary soil stabilization measures (e.g. mulch and polypropylene or polyethylene netting) when construction activities have ceased for a period of 7 days;
- Control erosion in concentrated flow paths if necessary by applying erosion control blankets and/or erosion control seeding;
- Seeding will be applied to areas deemed substantially complete; and
- Apply permanent erosion control to all remaining disturbed soil areas at completion of construction. Fertilize, seed, and mulch to vegetate the final cover.

Sufficient quantities of temporary soil stabilization materials will be maintained on-site to allow implementation as described in this SWPP.

Locations of soil stabilization BMPs are displayed in Figure 3.

5.1.2 Structural Controls

Structural controls are intended to complement and enhance the prescribed soil stabilization (erosion control) measures. Structural controls are designed to intercept and filter out soil particles that have been detached and transported by the force of water. This project will incorporate temporary structural control measures.

The following temporary structural control BMPs will be used at the landfill to prevent a net increase of sediment in storm water discharge relative to pre-construction levels:

- Install silt fences to retain sediment from disturbed areas and reduce the velocity of sheet flow during construction. These fences will be placed at maximum 100-ft intervals along the cap slopes to filter stormwater runoff. The silt fences will be removed when sediment protection is no longer needed;
- Utilize straw bale barriers for supplemental sediment control in areas where heavy sediment loads are anticipated. These bales will be removed when sediment protection is no longer needed;
- Locate straw bale barriers around the any storm water catch basins;
- Place rip-rap check dams at the toe of the slope if needed;
- During regrading and subgrade preparation, silt fencing and/or straw bales will be installed to retain sediment that enters/leaves the drainage ditch. The silt fences and straw bales will be installed prior to regrading activities and then temporarily removed when the vegetative cover is installed;
- Silt fences and/or straw bales will be reinstalled once the vegetative cover is completed. Appropriate precautions will be taken during installation of silt fences to prevent any damage to the liner system since some areas on the east side between the landfill limits and the ditch will possess less than a 2-ft thickness of vegetative cover;
- Construction of a vehicle tracking entrance/exit to minimize tracking of sediment onto adjacent roadways and remove it before completion of construction.

The following temporary structural control BMPs will be used at the on-site borrow area to prevent a net increase of sediment in storm water discharge relative to pre-construction levels:

- Install silt fence and straw bale barriers for supplemental sediment control, as needed, in areas where heavy sediment loads are anticipated. These bales will be removed when sediment protection is no longer needed;
- Following restoration, the laydown area will be graded to drain at a minimum 1% slope to the existing drainage channels as it currently does now.

Sufficient quantities of temporary sediment control materials including silt fence materials, straw bales, will be maintained on-site to allow implementation as described in this SWPP. These materials will also be available for rapid responses to control system failures or emergencies.

Locations of structural BMPs are displayed in Figures 2 and 3. Representative details for standard BMPs are provided in Appendix A.

5.1.3 Storm Water Management

Storm water management controls are intended to address the conveyance and temporary detention of storm water drainage. Velocity dissipation devices will be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive flow. The following permanent storm water management BMPs will be used at the Site:

- Install permanent vegetation on all distrubed areas as work is completed;

The following temporary storm water management BMPs will be used at the on-site borrow area:

- Utilize silt fence and straw bales to assist in storm water management

5.2 Other Controls

Non-storm water BMPs will be used to control other potential contaminant discharges at the construction site. These BMPs include:

- Collect and store all trash and construction debris in a secure dumpster. Waste materials will be disposed off-site in accordance with applicable solid waste management regulations;
- Prevent discharge of any solid materials (including building materials) to waters of the State of Indiana
- Provide on-site portable sanitary facilities that are serviced on a regular basis;
- Store equipment fuels, lubricants, and asphalt paving components in covered locations that are not directly exposed to rainfall events. Secondary containment is required for applicable fuel storage tanks in accordance with SPCC regulations;
- Provide drip pans for petroleum/liquid storage tanks and containers;
- Provide immediate response actions to any inadvertent spills associated with equipment refueling or maintenance activities;
- Apply non-contaminated water to disturbed soil areas of the site (roads, earthwork areas, etc.) to control dust, as necessary;
- Provide a stabilized construction entrance to help reduce vehicle tracking of sediments onto adjacent roads; and
- Roadways will be cleaned promptly to minimize the creation and/or dispersion of dust associated with construction activities, as needed. At a minimum, paved roadways will also be cleaned at least twice each day during periods when soil is being transferred between the borrow area and the landfill.
- Utilize tarps or visqueen to prevent contaminated run-off from the excavation site.

5.3 Coordination of BMPs with Construction Activities

BMPs will be sequentially implemented in coordination with the scheduled construction activities. As the locations of soil disturbance change, erosion and sedimentation controls will be adjusted accordingly to control storm water runoff at the downgradient perimeter of the site.
The following BMPs will be coordinated with construction activities:

- The stabilized construction site entrance and sedimentation basin will be constructed before clearing and grading begins.
- Temporary perimeter controls (silt fences and straw bales) will be installed prior to any clearing and re-grading activities and then temporarily removed when the vegetative cover is installed so the permanent erosion control measures can be installed. The permanent erosion measures will be installed immediately as vegetative is placed or the temporary measures will be installed until the permanent erosion measures are completed.
- Clearing and grading will not occur in an area until it is necessary for construction to proceed.
- During construction utilize berms on the down slope side of the trench to keep any potential contaminated storm water run off from reaching Unnamed and south Ditch or any water. Also during work activities try and keep waste materials covered with visqueen, tarps or clean cover dirt. If run-off happens to get to the bottom of the toe of slope HIS will utilize pumps to pump the material to frac-tanks for future disposal.
- Silt fences and/or straw bales will be reinstalled once the vegetative cover is completed;
- Once construction activity ceases permanently in an area, that area will be stabilized with permanent seed and turf mat;
- After the entire site is stabilized, accumulated sediment will be removed and placed in the onsite disposal area or hauled off to a local landfill.

BMPs implemented as part of this SWPP will be inspected, after a rain event greater than 0.5 inch in a 24-hour period, and maintained while HIS is actively working onsite.

Section 6 Maintenance and Inspection Procedures

Visual inspections of all storm water control measures, discharge locations, vehicle exits, disturbed areas of the construction site, and material storage areas will be performed at least once every 7 days and within 24 hours of the end of a storm with rainfall or snowfall amounts greater than 0.5 inches. Areas that have been temporarily or finally stabilized will be inspected at least once each month. The SWPP Coordinator or a designated representative will conduct each inspection. The inspection will verify that the structural BMPs described in Section 5 of this SWPP are in good condition and are minimizing erosion. The inspection will also verify that the procedures used to prevent storm water contamination from construction materials and petroleum products are effective. The following inspection and maintenance practices will be used to maintain erosion and sediment controls:

- Accessible discharge locations will be inspected to ensure that velocity dissipation devices are effective in preventing significant impacts to receiving waters;
- Built-up sediment will be removed from silt fencing when it has reached one-third the height of the fence;
- Silt fences will be inspected for depth of sediment, for tears, to see if the fabric is securely attached to the fence posts, and to see that the fence posts are firmly in the ground;
- Temporary and permanent seeding will be inspected for bare spots, washouts, and healthy growth;
- Disturbed areas and material storage areas that are exposed to precipitation will be inspected for evidence, or the potential for, pollutants entering the drainage system; and
- The stabilized construction entrance will be inspected for sediment tracked on the road, for clean gravel, and to make sure that all traffic uses the stabilized entrance when leaving the site.
- During inspection if any of the permanent or temporary erosion control measures are found to be damaged or in need of some work that work will be done before the end of that work day or as soon as safety will allow.

A maintenance inspection report will be prepared by the SWPP Coordinator (or a delegated representative) after each inspection. Appendix B displays a copy of an example inspection report form. Each signed report will include the scope of the inspection, names and qualifications of personnel making the inspection, date of inspection, major observations relating to the implementation of the SWPP, and any recommended corrective actions. Any BMP deficiencies that are noted during the inspection will result in a modification to the SWPP and be implemented within 7 days of the inspection.

Completed forms will be maintained on-site during the entire construction project and once the project is completed they will be submitted to the Trustee for their files.

Section 7 Record-keeping

This section describes record-keeping procedures that will be utilized to comply with the requirements. HIS will keep a record of each inspection onsite until the end of the project.

HIS will provide a copy of this SWPP to any Contractors who are responsible for installation, operation, or maintenance of any BMP. A copy of the SWPP will also be kept at the construction site for the duration of the construction period.

Once the project is completed HIS will retain all documentation, inspection reports, and the SWPP Plan and submit the documentation to the Trustee for their records.

Section 8 SWPP Amendments

This SWPP will be amended but not limited to whenever the following conditions occur:

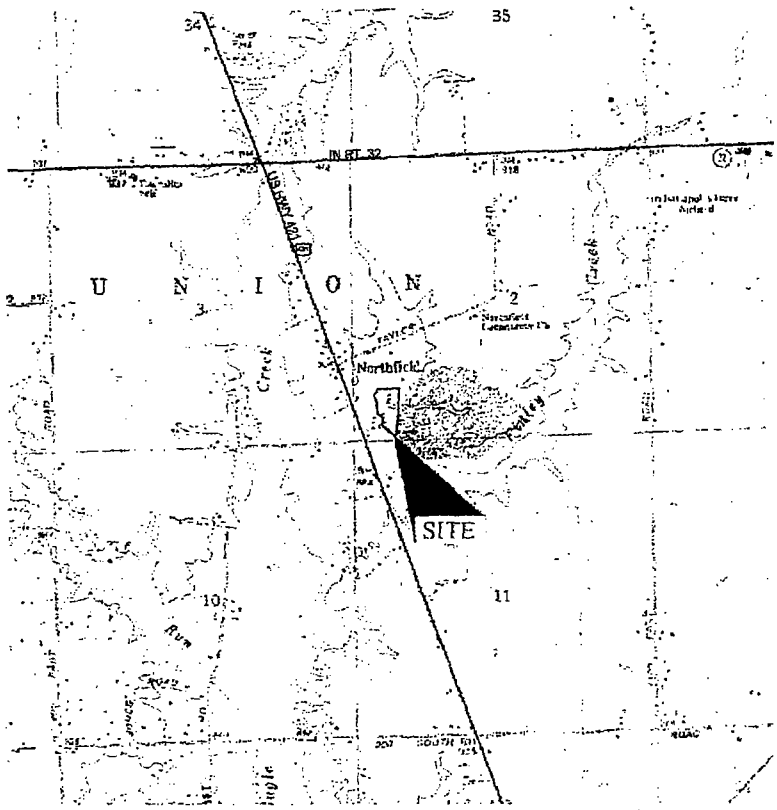
- Design, operation or maintenance of BMPs is changed;
- Design of the of the construction project is changed such that the quality of storm water discharges could be significantly affected;
- Maintenance inspections indicate deficiencies in the SWPP or any BMP;
- SWPP is determined to be ineffective in significantly minimizing or controlling erosion and sedimentation (e.g. there is visual evidence, such as excessive site erosion or excessive sediment deposits in streams or lakes).

References

USEPA, 1992. Storm Water Management for Construction Activities: Developing Pollution Prevention Plans.

USEPA, 1992. Best Management Practices and Construction Site Storm Water Discharge Control: An Inventory of Current Practices.

Figure 1



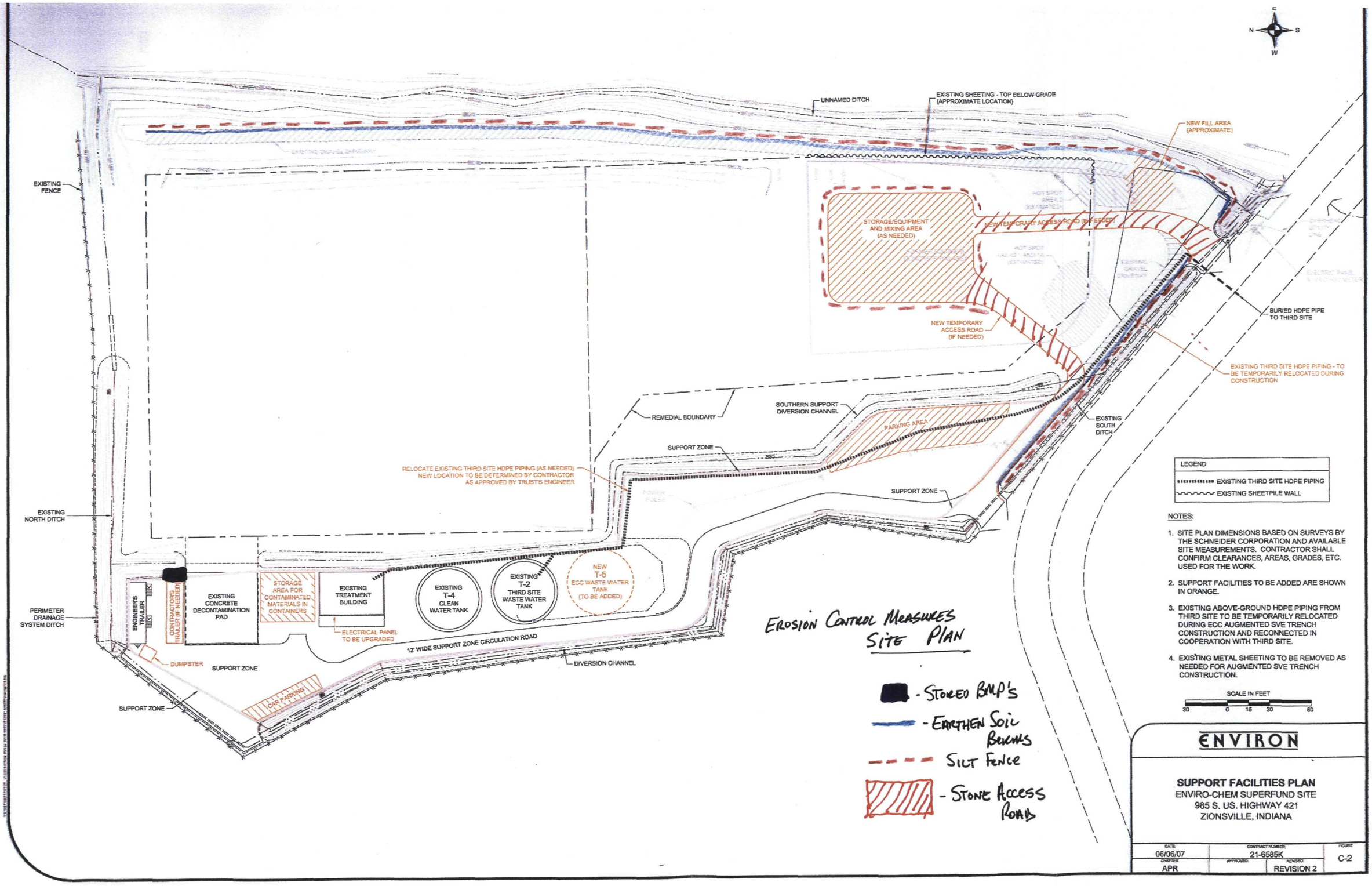
SITE LOCATION MAP

2000 0 2000 4000 6000 FEET

CONTOUR INTERVAL 10 FEET

SOURCE: U.S.G.S. 7.5 minute series (topographic)
Rosston Quadrangle, Indiana 1969; Photorevised 1987

Figure 2



NOTES:

1. SITE PLAN DIMENSIONS BASED ON SURVEYS BY THE SCHNEIDER CORPORATION AND AVAILABLE SITE MEASUREMENTS. CONTRACTOR SHALL CONFIRM CLEARANCES, AREAS, GRADES, ETC. USED FOR THE WORK.
2. SUPPORT FACILITIES TO BE ADDED ARE SHOWN IN ORANGE.
3. EXISTING ABOVE-GROUND HDPE PIPING FROM THIRD SITE TO BE TEMPORARILY RELOCATED DURING ECC AUGMENTED SVE TRENCH CONSTRUCTION AND RECONNECTED IN COOPERATION WITH THIRD SITE.
4. EXISTING METAL SHEETING TO BE REMOVED AS NEEDED FOR AUGMENTED SVE TRENCH CONSTRUCTION.

SCALE IN FEET
30 0 15 30 60

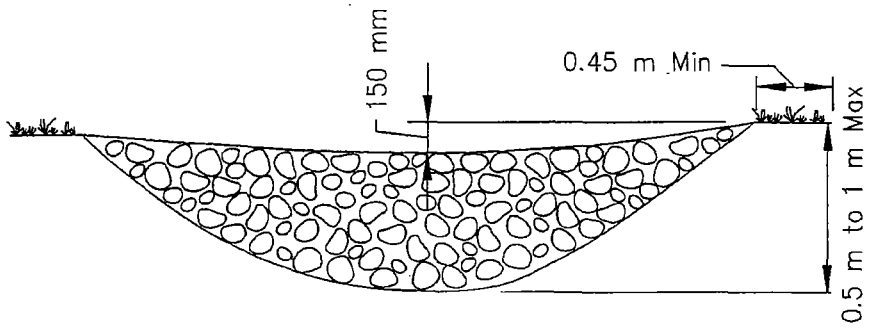
ENVIRON

SUPPORT FACILITIES PLAN
ENVIRO-CHEM SUPERFUND SITE
985 S. US. HIGHWAY 421
ZIONSVILLE, INDIANA

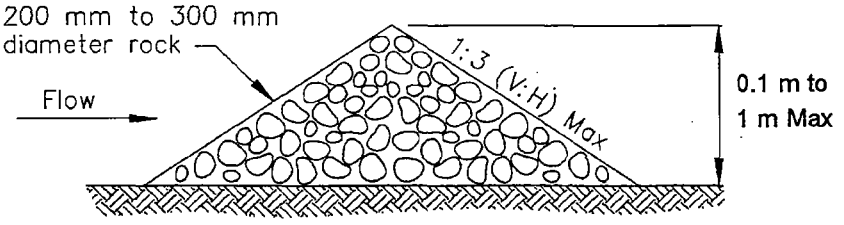
DATE:	CONTRACT NUMBER:		FIGURE
06/06/07	21-6585K		C-2
DRAWN BY: APR	APPROVED:	REVISED: REVISION 2	

Appendix A

Representative Details for Standard BMPs



ELEVATION

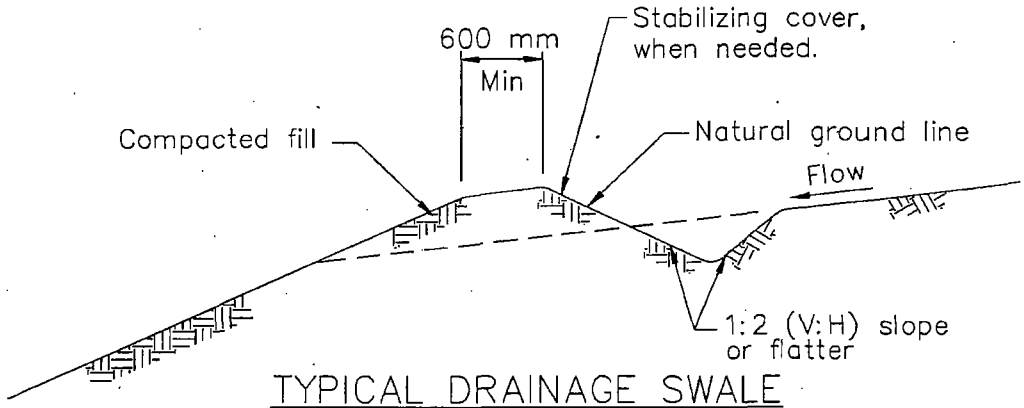


TYPICAL ROCK CHECK DAM SECTION

ROCK CHECK DAM
NOT TO SCALE

Earth Dikes/Drainage Swales and Lined Ditches

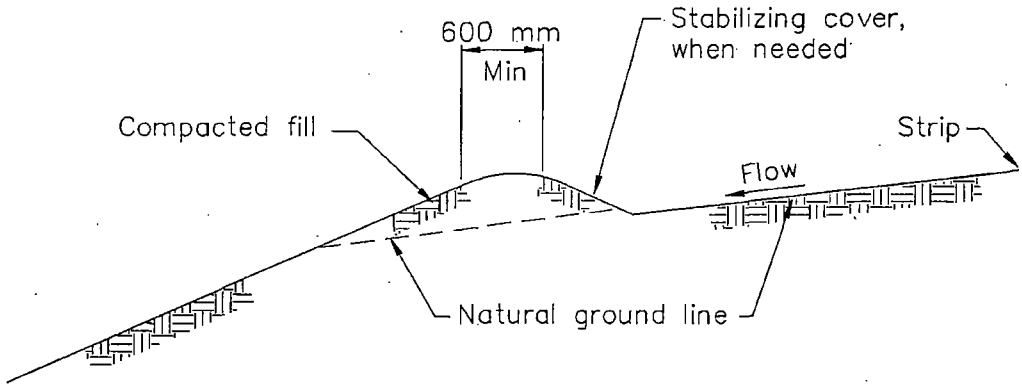
SS-9



TYPICAL DRAINAGE SWALE
NOT TO SCALE

NOTES:

1. Stabilize inlet, outlets and slopes.
2. Properly compact the subgrade, in conformance with Section 19–5 of the Caltrans Standard Specifications.

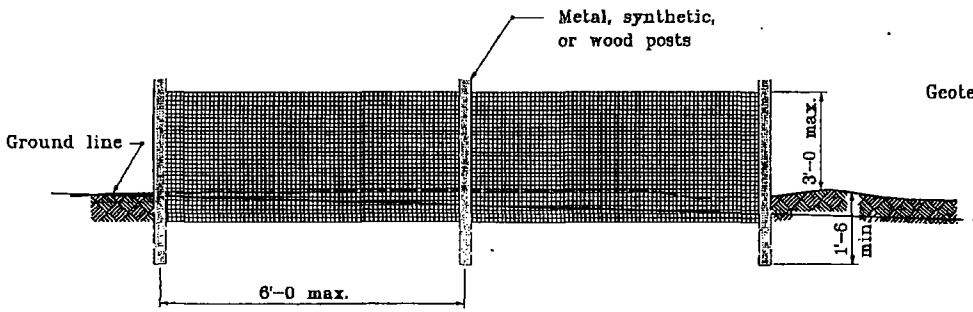


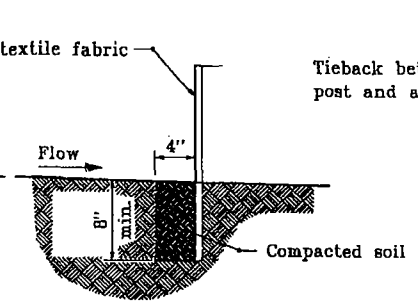
TYPICAL EARTH DIKE
NOT TO SCALE

GENERAL NOTES

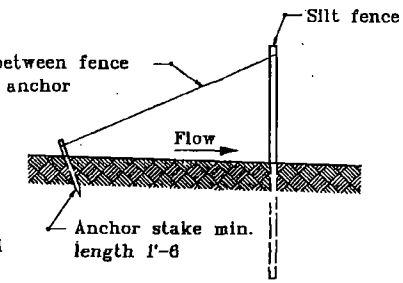
(1) Dimensions will vary based on right-of-way availability. Silt fence shall be placed as close as possible to edge of construction limits.

(2) The spacing of the tiebacks shall equal the spacing of the posts. Additional post depth or tiebacks may be required in unstable soils.

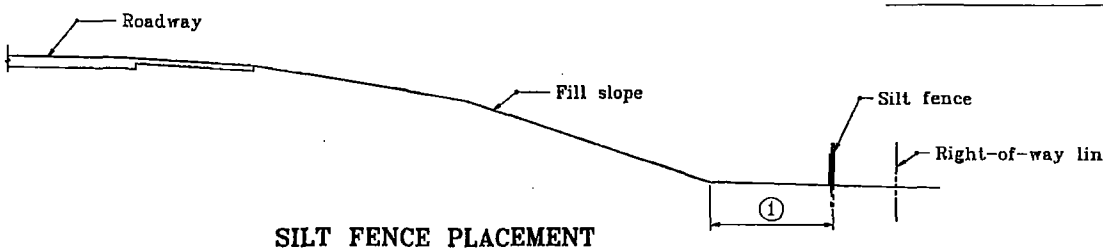




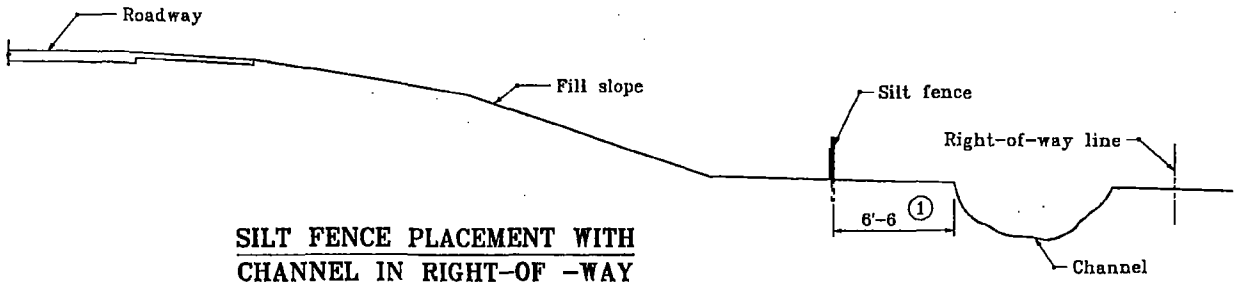
EMBEDMENT DETAIL



TIEBACK DETAIL (2)



SILT FENCE PLACEMENT RELATIVE TO R/W LINE



SILT FENCE PLACEMENT WITH CHANNEL IN RIGHT-OF -WAY

INDIANA DEPARTMENT OF TRANSPORTATION

TEMPORARY SILT FENCE

MARCH 2002

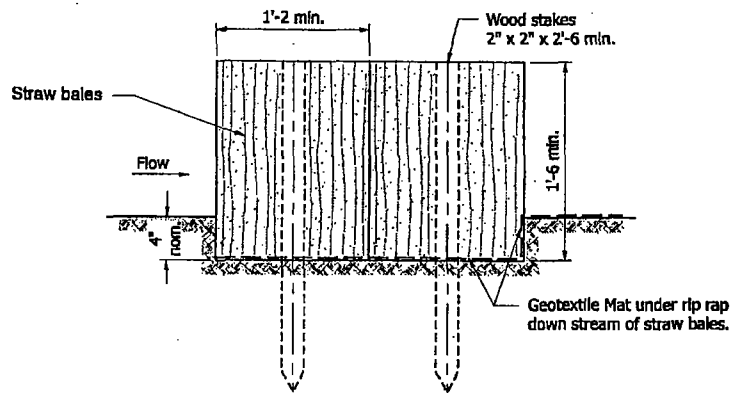
STANDARD DRAWING NO. E 205-TECP-02

RICHARD L. VanCLEAVE REGISTERED No. 9750 STATE OF INDIANA PROFESSIONAL ENGINEER

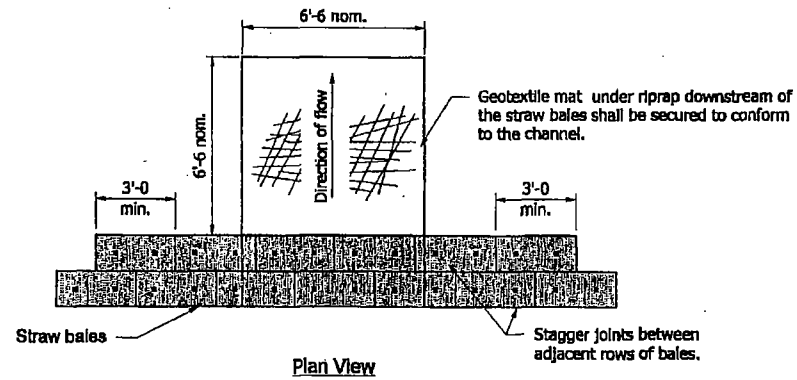
DESIGN STANDARDS ENGINEER

/s/ Richard L. VanCleave 3-01-02
DESIGN STANDARDS ENGINEER DATE

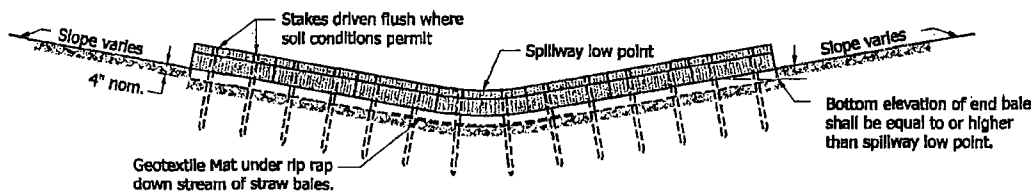
/s/ Richard K. Smutzer 3-01-02
CHIEF HIGHWAY ENGINEER DATE



SIDE ELEVATION



Plan View



Front Elevation

GENERAL NOTES

1. Ditch check dams shall be spaced such that the top of the downstream check dam is at the same elevation as the toe of the adjacent upstream check dam.

INDIANA DEPARTMENT OF TRANSPORTATION

TEMPORARY CHECK DAM STRAW BALES

SEPTEMBER 2007

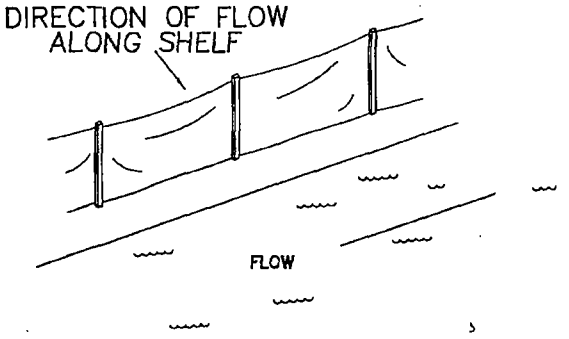
STANDARD DRAWING NO. E-205-TECD-02

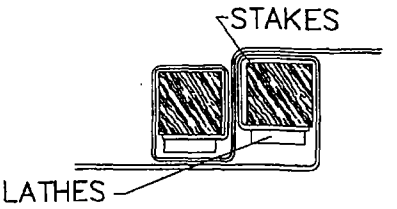
RICHARD L. VanCLEAVE REGISTERED No. 9750 STATE OF INDIANA PROFESSIONAL ENGINEER

DESIGN STANDARDS ENGINEER

/s/ Richard L. VanCleave 09/04/07
DESIGN STANDARDS ENGINEER DATE

/s/ Mark A. Miller 09/04/07
CHIEF HIGHWAY ENGINEER DATE





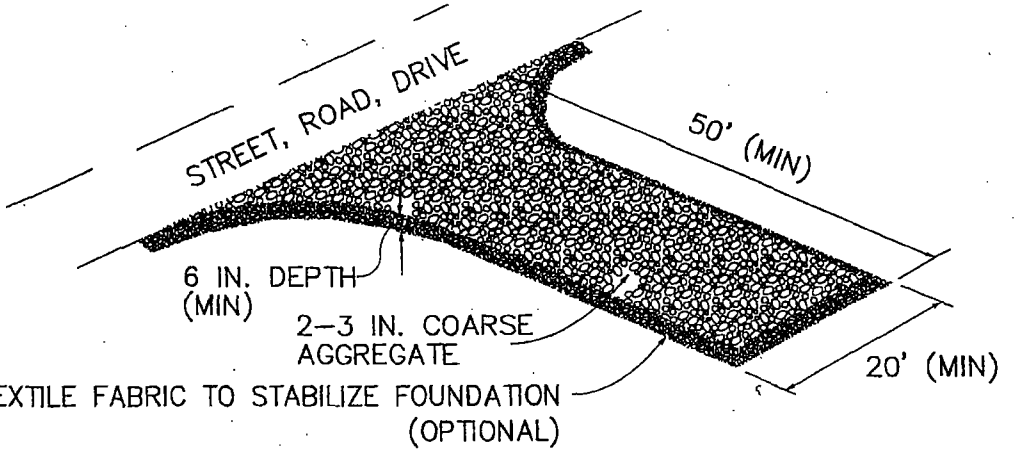
ROLL JUNCTIONS

INSTALLATION

1. DIG 6" DEEP TRENCH ALONG PROPOSED FENCE LINE (A TRENCHING MACHINE IS NEEDED ON LONG RUNS.)
2. POUND STAKE IN TRENCH 6" to 8" OR UNTIL SECURE. BE SURE TO STRETCH FABRIC TAUT WHEN POUNDING STAKES. (NOTE: STAKE MUST BE ON THE DOWNHILL OR DOWNSTREAM SIDE OF THE FENCE.)
3. DRAPE LOOSE END OF GEOTEXTILE INTO TRENCH.
4. BACKFILL AND COMPACT SOIL ON BOTH SIDES.

PERIMETER CONTROL

NOT TO SCALE



NOTES:
MATERIAL: 2–3 IN. WASHED STONE (INDOT CA No. 2) OVER A STABLE FOUNDATION
THICKNESS: 6 IN MINIMUM DEPTH: 12 FT. MINIMUM OR FULL WIDTH OF ENTRANCE/EXIT ROADWAY, WHICHEVER IS GREATER. LENGTH: 50 FT. MINIMUM.
GEOTEXTILE FABRIC UNDERLINER: MAY BE USED IN WET CONDITIONS OR FOR SOIL WITHIN A HIGH SEASONAL WATER TABLE TO PROVIDE GREATER BEARING STRENGTH.

CONSTRUCTION ENTRANCE/EXIT DETAIL

NOT TO SCALE

Appendix B

Sample Site Inspection Report Form

SWPPP INSPECTION REPORTING FORM

Project:						By:	Date:
Permit No.	Overall Condition			Need Repair		G = GOOD, F = FAIR, P = POOR, Y = YES, N = NO Comments	
STRUCTURAL MEASURES							
Sediment Containment Systems	G	F	P	Y	N		
Barriers for Sheet Flows							
Bale	G	F	P	Y	N		
Silt Fence	G	F	P	Y	N		
	G	F	P	Y	N		
Drain/Inlet Protection							
Bale Barriers	G	F	P	Y	N		
Rock Barriers	G	F	P	Y	N		
Inserts	G	F	P	Y	N		
	G	F	P	Y	N		
Channel Check Structures							
Bale Barriers	G	F	P	Y	N		
Rock Barriers	G	F	P	Y	N		
	G	F	P	Y	N		
Other BMPs							
Vehicle Tracking Pad	G	F	P	Y	N		
	G	F	P	Y	N		
NON-STRUCTURAL MEASURES							
Diversion Dikes and/or Swales	G	F	P	Y	N		
Slope Drains	G	F	P	Y	N		
Temporary Vegetation	G	F	P	Y	N		
Perennial Vegetation	G	F	P	Y	N		
Mulch and/or BFM Protection	G	F	P	Y	N		
Soil Binder Protection	G	F	P	Y	N		
Hillside RECPs	G	F	P	Y	N		
Drainage Channel TRMs	G	F	P	Y	N		
Riprap and/or Gabions	G	F	P	Y	N		
	G	F	P	Y	N		
	G	F	P	Y	N		

SWPPP INSPECTION REPORTING FORM

Will existing BMPs need to be modified or removed or additional BMPs installed? YES NO If yes, list the action items to be completed on the following table.

Actions to be Completed	Date Completed
1.	
2.	
3.	
4.	
5.	
6.	

Weather information since the last inspection was held.

Event	Date Began	Duration (Hours)	Amount (Inches)		Event	Date Began	Duration (Hours)	Amount (Inches)
1					2			
3					4			
5					6			

Are uncontrolled releases of mud or muddy water from the site and/or deposits of sediment evident? YES NO If yes, where and what corrective actions are to occur?

Are non-compliance incidents evident? YES NO If no, sign the following certification: **I certify the facility is in compliance with the SWPPP and this permit.** _____

If yes, should the SWPPP drawings be modified? YES NO If yes, the following drawing modifications are to be completed within seven days.

Comments:

Inspection completed on: _____ by: _____
(Signature)

Title/Qualification of Inspector: _____ CPESC No. _____

Storm Water Pollution Prevention Plan (Erosion Control Plan) FOR ATTACHMENT Z-1 REMEDY

ENVIRO-CHEM SUPERFUND SITE ATTACHMENT Z-1 REMEDY 985 SOUTH U.S. HIGHWAY 421 ZIONSVILLE, INDIANA

Prepared for:

Environ International Corporation
740 Waukegan Road, Suite 401
Deerfield, IL 60015

Submitted by:

HIS Constructors, LLC.
5150 E 65th Street, Suite B
Indianapolis, IN 46220

February 13, 2008

Table of Contents

Section 1	**SWPP Certification**	**2**
1.1	Contractor and Subcontractor Certification	2
Section 2	**Introduction**	**4**
2.1	Purpose	4
2.2	Plan Organization	4
Section 3	**SWPP Coordinator and Responsibilities**	**5**
Section 4	**Site Description**	**6**
4.1	Site Location	6
4.2	Existing Site Conditions	6
4.3	Description of Construction Activities	6
Section 5	**Best Management Practices**	**8**
5.1	Erosion and Sediment Controls	8
	5.1.1 Stabilization Controls	8
	5.1.2 Structural Controls	9
	5.1.3 Storm Water Management	10
5.2	Other Controls	10
5.3	Coordination of BMPs with Construction Activities	11
Section 6	**Maintenance and Inspection Procedures**	**12**
Section 7	**Record-keeping**	**14**
Section 8	**SWPP Amendments**	**15**
References		**16**

Figures

1 Site Location Map

2 Sediment and Erosion Control Plan and Location of Stored BMP's

Appendices

A Representative Details for Standard BMPs

B Sample Inspection Report Form

Section 1 SWPP Certification

1.1 Contractor and Subcontractor Certification

Each Contractor and Subcontractor that will be implementing a control measure as described in this SWPP must sign a one of the certifications below before conducting any professional service at the Site.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designated to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Brian Keene
Contractor's Signature

12-14-07
Date

HIS Constructors, LLC - Ops Mgr
Contractor's Name and Title

Name of Contractor Firm

5150 E 65th Street Suite B
Address

317-541-9290
Telephone Number

"I certify under a penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit that authorizes the storm water discharges associated with construction activity from the Enviro-Chem Superfund Site identified as part of this certification."

Brian Keeney — 12-14-07

Subcontractor's Signature — Date

Brian Keeney - Ops Mgr

Subcontractor's Name and Title

HIS Constructors, LLC

Name of Subcontractor Firm

5150 E 65th St Suite B

Address

317-541-9290

Telephone Number

Description of work or what Part of the SWPP responsible:

Section 2 Introduction

This Storm Water Pollution Prevention Plan (SWPP) document was prepared for HIS Constructors, LLC (HIS) and their use at the Enviro-Chem Superfund Site in Zionsville Indiana.

2.1 Purpose

This SWPP has two primary objectives:

- Identify, construct, and implement Best Management Practices (BMPs) to reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges from the construction site during construction; and
- Develop maintenance and inspection procedures for BMPs that are implemented during the construction period.

This SWPP is intended to fullfill requirements for construction activities that disturb greater than 1 acre of land, as required. This SWPP conforms with the required elements of the NPDES regulation, to ensure compliance, this plan was prepared in accordance with various USEPA guidance documents including Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices and Construction Site Stormwater Discharge Control: An Inventory of Current Practices.

This SWPP will be modified and amended to reflect any changes in construction or operations that may affect the discharge of pollutants from the construction site to surface waters or groundwater. The SWPP will also be amended if it is in violation of any condition of the Permit or has not achieved the general objective of reducing pollutants in storm water discharges. The SWPP shall be readily available on-site for the duration of the project. The SWPP Plan is also intended to fulfill the requirements identified in specification 1502 This plan also meets any applicable local requirements (if any).

2.2 Plan Organization

This document is divided into eight sections of text. A brief description of each section is presented below.

Section 1.0, SWPP Certification, presents the certifying statement and the associated signatories.

Section 2.0, Introduction, describes the purpose and organization of the SWPP.

Section 3.0, SWPP Coordinator and Responsibilities, identifies the parties who will supervise implementation of the SWPP and their responsibilities.

Section 4.0, Site Description, provides a summary of the site characteristics and the construction activities that will be performed.

Section 5.0, Best Management Practices, describes the storm water control measures that will be implemented at the construction site. Proposed locations are also provided.

Section 6.0, Maintenance and Inspection Procedures, summarizes the inspection procedures that will be conducted to ensure the effectiveness of the prescribed BMPs.

Section 7.0, Record-keeping, outlines the SWPP documentation requirements.

Section 8.0, SWPP Amendments, describes conditions, which require amendment of this SWPP.

Section 3 SWPP Coordinator and Responsibilities

The SWPP Coordinator for the construction site is:

Mr. Kieran Hosey
Project Manager
HIS Constructors, LLC
5150 E 65th Street Suite B
Indianapolis, IN 46220
(317) 541-9290

The SWPP Coordinator shall have primary responsibility and significant authority for the implementation, maintenance, and inspection associated with the approved SWPP. Duties of the SWPP Coordinator include but are not limited to:

- Implement all elements of the SWPP, including but not limited to:
  - Implementing prompt and effective erosion and sediment control measures
  - Implementing all non-storm water management, and materials and waste management activities such as: monitoring discharges; general site clean-up; vehicle and equipment cleaning, fueling and maintenance; spill control; and ensuring that no materials other than storm water are discharged in quantities which will have an adverse effect on receiving waters or storm drain systems;
- Ensure Contractor compliance with the SWPP and the Permit;
- Ensure that pre-storm, storm event, and post-storm inspections are completed;
- Implement and oversee Contractor training;
- Ensure elimination of all unauthorized discharges;
- The SWPP Coordinator shall be assigned authority by the Contractor to mobilize crews for immediate repairs to the control measures, if necessary; and
- Ensure that necessary corrections/repairs are made immediately, and that the project complies with the SWPP, Permit, and any associated plans.

Section 4 Site Description

This section describes the pertinent site characteristics and nature of the planned construction activities.

4.1 Site Location

The construction site is located off County Road 421 located in Boone County, north of Zionsville, Indiana, approximately 10 miles northwest of Indianapolis, in an area that is primarily agricultural but also contains some areas of commercial and industrial land use.

4.2 Existing Site Conditions

The site is situated on a pre-existing Superfund Site along Unnamed and South drainage ditch. Near surface soils consist of relatively impermeable brown silty clay which overlies the contaminated fill material.

Precipitation that does not infiltrate the landfill is presently being sheet flowed to the Unnamed and South Drainage Ditch Area.

4.3 Description of Construction Activities

HIS is performing construction activities to build an Augmented SVE Trench in accordance with the plans and specifications. Also part of the work activities, include replacing the cover system to be installed to further minimize permanent erosion. Major items of work include:

- Clearing and grubbing;
- Temporary erosion and sediment measures;
- Water management;
- Trench Excavation;
- Installation of Slurry trench;
- Installation of SVE Augmented System with backfill:
- Geomembrane and Clay cover;

Construction activities will be performed in sequence to minimize the area of exposed soils and to construct the permanent erosion control measures into the project as soon as possible. The planned order of activities is outlined below:

1. Installation of temporary structural erosion control measures;
2. Clearing and Grubbing (as needed)
3. Site Preparation of Temporary Roads and Laydown Area;
4. SVE Trench Excavation and Installation;
5. Backfill SVE Trench;

6. Install Geomembrane and Clay Liner;
7. Installation of permanent erosion and vegetation measures
8. Removal of temporary erosion control measures.

The following estimates are provided for the construction site:

Total area of site if about	6	acres
Disturbed area	2	acres
Runoff coefficient before construction	0.30	
Runoff coefficient after construction	0.40	

Section 5 Best Management Practices

This section describes the Best Management Practices (BMPs) that will be implemented at the site. Figure 2 displays drainage patterns, areas of disturbance, approximate final slopes, and site locations where the prescribed BMPs will be implemented at the landfill.

5.1 Erosion and Sediment Controls

Various BMPs including stabilization controls, structural controls, and storm water management controls will be implemented to control and mitigate the impacts of storm water runoff at the construction site.

5.1.1 Stabilization Controls

Soil stabilization, also referred to as erosion control, consists of source control measures that are designed to prevent soil particles from detaching and becoming suspended in storm water runoff. Soil stabilization BMPs protect the soil surface by covering and/or binding soil particles. This project will incorporate both temporary and permanent soil stabilization measures. This project will utilize and implement the following BMPs for effective temporary and final soil stabilization during construction:

- Preserve existing vegetation where required and when feasible. The time period for disturbed areas to be without vegetative cover will be minimized to the extent practical;
- Apply temporary soil stabilization (erosion control) to remaining active and non-active areas. Reapply as necessary to maintain effectiveness;
- Implement temporary soil stabilization measures (e.g. mulch) in non-active areas where construction activities have ceased for a period of 14 days;
- For areas with a slope of greater than 3:1 or a slope of greater than 3% and greater than 150 feet in length, implement temporary soil stabilization measures (e.g. mulch and polypropylene or polyethylene netting) when construction activities have ceased for a period of 7 days;
- Control erosion in concentrated flow paths if necessary by applying erosion control blankets and/or erosion control seeding;
- Seeding will be applied to areas deemed substantially complete; and
- Apply permanent erosion control to all remaining disturbed soil areas at completion of construction. Fertilize, seed, and mulch to vegetate the final cover.

Sufficient quantities of temporary soil stabilization materials will be maintained on-site to allow implementation as described in this SWPP.

Locations of soil stabilization BMPs are displayed in Figure 3.

5.1.2 Structural Controls

Structural controls are intended to complement and enhance the prescribed soil stabilization (erosion control) measures. Structural controls are designed to intercept and filter out soil particles that have been detached and transported by the force of water. This project will incorporate temporary structural control measures.

The following temporary structural control BMPs will be used at the landfill to prevent a net increase of sediment in storm water discharge relative to pre-construction levels:

- Install silt fences to retain sediment from disturbed areas and reduce the velocity of sheet flow during construction. These fences will be placed at maximum 100-ft intervals along the cap slopes to filter stormwater runoff. The silt fences will be removed when sediment protection is no longer needed;
- Utilize straw bale barriers for supplemental sediment control in areas where heavy sediment loads are anticipated. These bales will be removed when sediment protection is no longer needed;
- Locate straw bale barriers around the any storm water catch basins;
- Place rip-rap check dams at the toe of the slope if needed;
- During regrading and subgrade preparation, silt fencing and/or straw bales will be installed to retain sediment that enters/leaves the drainage ditch. The silt fences and straw bales will be installed prior to regrading activities and then temporarily removed when the vegetative cover is installed;
- Silt fences and/or straw bales will be reinstalled once the vegetative cover is completed. Appropriate precautions will be taken during installation of silt fences to prevent any damage to the liner system since some areas on the east side between the landfill limits and the ditch will possess less than a 2-ft thickness of vegetative cover;
- Construction of a vehicle tracking entrance/exit to minimize tracking of sediment onto adjacent roadways and remove it before completion of construction.

The following temporary structural control BMPs will be used at the on-site borrow area to prevent a net increase of sediment in storm water discharge relative to pre-construction levels:

- Install silt fence and straw bale barriers for supplemental sediment control, as needed, in areas where heavy sediment loads are anticipated. These bales will be removed when sediment protection is no longer needed;
- Following restoration, the laydown area will be graded to drain at a minimum 1% slope to the existing drainage channels as it currently does now.

Sufficient quantities of temporary sediment control materials including silt fence materials, straw bales, will be maintained on-site to allow implementation as described in this SWPP. These materials will also be available for rapid responses to control system failures or emergencies.

Locations of structural BMPs are displayed in Figures 2 and 3. Representative details for standard BMPs are provided in Appendix A.

5.1.3 Storm Water Management

Storm water management controls are intended to address the conveyance and temporary detention of storm water drainage. Velocity dissipation devices will be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive flow. The following permanent storm water management BMPs will be used at the Site:

- Install permanent vegetation on all distrubed areas as work is completed;

The following temporary storm water management BMPs will be used at the on-site borrow area:

- Utilize silt fence and straw bales to assist in storm water management

5.2 Other Controls

Non-storm water BMPs will be used to control other potential contaminant discharges at the construction site. These BMPs include:

- Collect and store all trash and construction debris in a secure dumpster. Waste materials will be disposed off-site in accordance with applicable solid waste management regulations;
- Prevent discharge of any solid materials (including building materials) to waters of the State of Indiana
- Provide on-site portable sanitary facilities that are serviced on a regular basis;
- Store equipment fuels, lubricants, and asphalt paving components in covered locations that are not directly exposed to rainfall events. Secondary containment is required for applicable fuel storage tanks in accordance with SPCC regulations;
- Provide drip pans for petroleum/liquid storage tanks and containers;
- Provide immediate response actions to any inadvertent spills associated with equipment refueling or maintenance activities;
- Apply non-contaminated water to disturbed soil areas of the site (roads, earthwork areas, etc.) to control dust, as necessary;
- Provide a stabilized construction entrance to help reduce vehicle tracking of sediments onto adjacent roads; and
- Roadways will be cleaned promptly to minimize the creation and/or dispersion of dust associated with construction activities, as needed. At a minimum, paved roadways will also be cleaned at least twice each day during periods when soil is being transferred between the borrow area and the landfill.
- Utilize tarps or visqueen to prevent contaminated run-off from the excavation site.

5.3 Coordination of BMPs with Construction Activities

BMPs will be sequentially implemented in coordination with the scheduled construction activities. As the locations of soil disturbance change, erosion and sedimentation controls will be adjusted accordingly to control storm water runoff at the downgradient perimeter of the site.
The following BMPs will be coordinated with construction activities:

- The stabilized construction site entrance and sedimentation basin will be constructed before clearing and grading begins.
- Temporary perimeter controls (silt fences and straw bales) will be installed prior to any clearing and re-grading activities and then temporarily removed when the vegetative cover is installed so the permanent erosion control measures can be installed. The permanent erosion measures will be installed immediately as vegetation is placed or the temporary measures will be installed until the permanent erosion measures are completed.
- Clearing and grading will not occur in an area until it is necessary for construction to proceed.
- During construction utilize berms on the down slope side of the trench to keep any potential contaminated storm water run off from reaching Unnamed and south Ditch or any water. Also during work activities try and keep waste materials covered with visqueen, tarps or clean cover dirt. If run-off happens to get to the bottom of the toe of slope HIS will utilize pumps to pump the material to frac-tanks for future disposal.
- Silt fences and/or straw bales will be reinstalled once the vegetative cover is completed;
- Once construction activity ceases permanently in an area, that area will be stabilized with permanent seed and turf mat;
- After the entire site is stabilized, accumulated sediment will be removed and placed in the onsite disposal area or hauled off to a local landfill.
- During the active phase of the project, positive drainage will be maintained from the treatment system discharge point.

BMPs implemented as part of this SWPP will be inspected, after a rain event greater than 0.5 inch in a 24-hour period, and maintained while HIS is actively working onsite. This plan is intended to conform with USEPA guidance and meet all state and local requirements (See Section 2.1 Page 4 and References, Page 16).

Section 6 Maintenance and Inspection Procedures

Visual inspections of all storm water control measures, discharge locations, vehicle exits, disturbed areas of the construction site, and material storage areas will be performed at least once every 7 days and within 24 hours of the end of a storm with rainfall or snowfall amounts greater than 0.5 inches. Areas that have been temporarily or finally stabilized will be inspected at least once each month. The SWPP Coordinator or a designated representative will conduct each inspection. The inspection will verify that the structural BMPs described in Section 5 of this SWPP are in good condition and are minimizing erosion. The inspection will also verify that the procedures used to prevent storm water contamination from construction materials and petroleum products are effective. The following inspection and maintenance practices will be used to maintain erosion and sediment controls:

- Accessible discharge locations will be inspected to ensure that velocity dissipation devices are effective in preventing significant impacts to receiving waters;
- Built-up sediment will be removed from silt fencing when it has reached one-third the height of the fence;
- Silt fences will be inspected for depth of sediment, for tears, to see if the fabric is securely attached to the fence posts, and to see that the fence posts are firmly in the ground;
- Temporary and permanent seeding will be inspected for bare spots, washouts, and healthy growth;
- Disturbed areas and material storage areas that are exposed to precipitation will be inspected for evidence, or the potential for, pollutants entering the drainage system; and
- The stabilized construction entrance will be inspected for sediment tracked on the road, for clean gravel, and to make sure that all traffic uses the stabilized entrance when leaving the site.
- During inspection if any of the permanent or temporary erosion control measures are found to be damaged or in need of some work that work will be done before the end of that work day or as soon as safety will allow.

A maintenance inspection report will be prepared by the SWPP Coordinator (or a delegated representative) after each inspection. Appendix B displays a copy of an example inspection report form. Each signed report will include the scope of the inspection, names and qualifications of personnel making the inspection, date of inspection, major observations relating to the implementation of the SWPP, and any recommended corrective actions. Any BMP deficiencies that are noted during the inspection will result in a modification to the SWPP and be implemented within 7 days of the inspection.

Completed forms will be maintained on-site during the entire construction project and once the project is completed they will be submitted to the Trustee for their files.

Section 7 Record-keeping

This section describes record-keeping procedures that will be utilized to comply with the requirements. HIS will keep a record of each inspection onsite until the end of the project.

HIS will provide a copy of this SWPP to any Contractors who are responsible for installation, operation, or maintenance of any BMP. A copy of the SWPP will also be kept at the construction site for the duration of the construction period.

Once the project is completed HIS will retain all documentation, inspection reports, and the SWPP Plan and submit the documentation to the Trustee for their records.

Section 8 SWPP Amendments

This SWPP will be amended but not limited to whenever the following conditions occur:

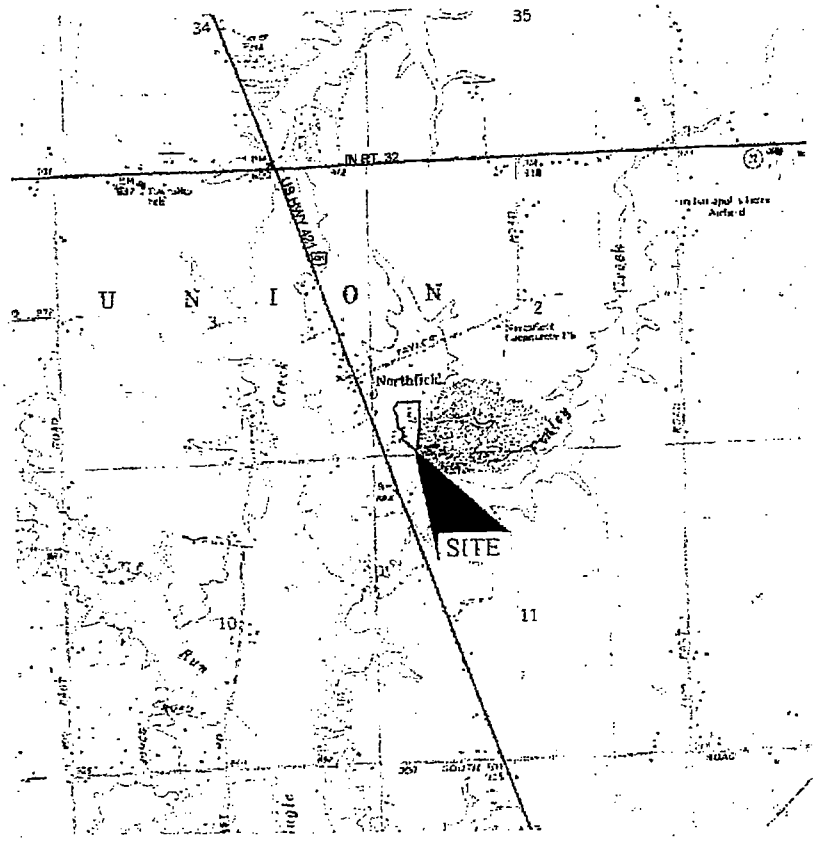
- Design, operation or maintenance of BMPs is changed;
- Design of the of the construction project is changed such that the quality of storm water discharges could be significantly affected;
- Maintenance inspections indicate deficiencies in the SWPP or any BMP;
- SWPP is determined to be ineffective in significantly minimizing or controlling erosion and sedimentation (e.g. there is visual evidence, such as excessive site erosion or excessive sediment deposits in streams or lakes).

References

USEPA, 1992. Storm Water Management for Construction Activities: Developing Pollution Prevention Plans.

USEPA, 1992. Best Management Practices and Construction Site Storm Water Discharge Control: An Inventory of Current Practices.

Figure 1



SITE LOCATION MAP

2000 0 2000 4000 6000 FEET

CONTOUR INTERVAL 10 FEET

SOURCE: U.S.G.S. 7.5 minute series (topographic)
Rossiter Quadrangle, Indiana 1969; Photorevised 1987

Figure 2

SDMS US EPA Region V

Imagery Insert Form

Some images in this document may be illegible or unavailable in SDMS.
Please see reason(s) indicated below:

☐ Illegible due to bad source documents. Image(s) in SDMS is equivalent to hard copy.

Specify Type of Document(s) / Comments:

☐ Includes ___ COLOR or RESOLUTION variations.
Unless otherwise noted, these pages are available in monochrome. The source document page(s) is more legible than the images. The original document is available for viewing at the Superfund Records Center.

Specify Type of Document(s) / Comments:

☐ Confidential Business Information (CBI).
This document contains highly sensitive information. Due to confidentiality, materials with such information are not available in SDMS. You may contact the EPA Superfund Records Manager if you wish to view this document.

Specify Type of Document(s) / Comments:

☒ Unscannable Material:
Oversized __x__ or ____ Format.
Due to certain scanning equipment capability limitations, the document page(s) is not available in SDMS. .

Specify Type of Document(s) / Comments:

☐ Document is available at the EPA Region 5 Records Center.

Specify Type of Document(s) / Comments: